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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,893	01/17/2001	Shih-Chieh Hung	11709-003001	6011

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EXAMINER	
DUNSTON, JENNIFER ANN	
ART UNIT	PAPER NUMBER
1636	

MAIL DATE	DELIVERY MODE
05/27/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	**Application No.**	**Applicant(s)**
	09/761,893	HUNG ET AL.
	Examiner	**Art Unit**
	Jennifer Dunston	1636

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 03 May 2011 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1,4,6,9-11 and 34-38*.
   Claim(s) withdrawn from consideration: *12-20*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☒ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/Jennifer Dunston/
Primary Examiner
Art Unit: 1636

Continuation of 5. Applicant's reply has overcome the following rejection(s): The rejection of claims 1, 4, 6, 9-11 and 34-38 under 35 USC 112, second paragraph, has been withdrawn in view of Applicant's amendment to claim 1.

Continuation of 11. does NOT place the application in condition for allowance because: Claims 1, 4, 6, 9, 11 and 34-38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan et al in view of Prockop et al and Matsui et al.
Claim 10 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan et al in view of Prockop et al and Matsui et al, and further in view of Pittenger et al.
Claims 1, 4, 6, 9, 11 and 34-38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan et al in view of Burkitt et al and Mussi et al.
Claim 10 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan et al in view of Burkitt et al and Mussi et al, and further in view of Pittenger et al.
Claims 1, 4, 6, 9, 11 and 34-38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan et al in view of Guirguis and Matsui et al.
Claim 10 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan et al in view of Guirguis and Matsui et al.

Applicant's arguments filed 5/3/2011 have been fully considered but they are not persuasive.

The response asserts that there is no motivation or reason to combine these prior arts. Specifically, the response asserts that the function of the Leukosorb filter of Caplan et al for the separation of human MSCs from fat cells and red blood cells from bone marrow aspirate is exactly opposite the filter of Matsui et al.

This argument is not found persuasive. Caplan et al teach the use of a Leukosorb™ filter to remove red blood cells, where the mesenchymal stem cells (MSCs) are retained in the filter and the red blood cells pass through the filter (e.g., column 46, lines 11-34). The filter of Matsui et al would function in the same manner to retain the MSCs while allowing the red blood cells to pass though. Prockop et al teach that MSCs are retained on a polycarbonate filter containing 10 micrometer pores (e.g., column 39, line 60 to column 40, line 42), and Matsui et al teach a device with a polycarbonate filter (e.g., column 2, lines 41-45; column 3, lines 5-18; Figure 8). Both filters retain MSCs while allowing smaller red blood cells to pass through.

The response criticizes the experiments of Prockop et al, because frozen stock of MSCs, which did not contain haematopoietic stem cells, were used.

This argument is not found persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., separation of haematopoietic stem cells from mesenchymal stem cells) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The response asserts that the specification teaches that "in one preferred embodiment, cell populations having greater than 98% of human MSCs can be obtained in accordance with the method of the invention, and such isolated MSCs can proliferate without differentiation and reach confluence even after 12 passages. The isolated MSCs of the present invention are uniform CD34-, and can be induced to differentiate into bone, adipose, cartilage, and various other type of connective tissues." [0011]. The response asserts that the present application created an unexpected or significant improvement at the time of the invention.

This argument is not found persuasive. The claims do not require the MSCs to be obtained with greater than 98% purity. Furthermore, the declaration filed 5/3/2011 indicates that Applicant used pores of 0.4 to 16 microns, which is not commensurate in scope with the claimed invention. Moreover, no objective data is provided for a comparison of the claimed invention and the closest prior art to provide evidence of an unexpected or superior result.

For these reasons, and the reasons made of record in the previous office actions, the rejections are maintained.

The declaration under 37 CFR 1.132 filed 5/3/2011 is insufficient to overcome the rejection of claims based upon the application of the Caplan, Prockop, Matsui, Pittenger, Burkitt, Mussi, and Guirguis under 35 U.S.C. 103(a), as set forth in the last Office action because:
It refer(s) only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.
It states that the claimed subject matter solved a problem that was long standing in the art. However, there is no showing that others of ordinary skill in the art were working on the problem and if so, for how long. In addition, there is no evidence that if persons skilled in the art who were presumably working on the problem knew of the teachings of the above cited references, they would still be unable to solve the problem. See MPEP § 716.04.

Declarant is of the opinion that the application created an unexpected result or significant improvement. The declaration asserts that cell populations having greater than 98% of human MSCs could be obtained in accordance with the method of the invention, and such isolated MSCs can proliferate without differentiation and reach confluence even after 12 passages, which solved part of the long-felt need problems of human MSCs. Further, the declaration states that the working example on page 5 of the foreign priority document mentions that the upper plate had pores of 0.4 to 16 microns in diameter.

No objective evidence is provided of the unexpected result. No comparison is made between the claimed invention and the closes prior art. No nexus links the unexpected result to the claimed invention. Although the foreign priority document may refer to pores of 0.4 to 16

microns, this information is not present in the originally filed specification of the present application. Moreover, there is no clear definition of the long-felt need. First, the need must have been a persistent one that was recognized by ordinary skill in the art. Second, the long-felt need must not have been satisfied by another before the invention by applicant. Third, the invention must satisfy the long-felt need.